A GUIDE FOR AUTOMOTIVE REPAIR SHOPS

Washington State Department of Ecology
Hazardous Waste and Toxics Reduction Program
Publication #92-BR-12
Revised July, 1996

Reduce Waste
printed on recycled paper

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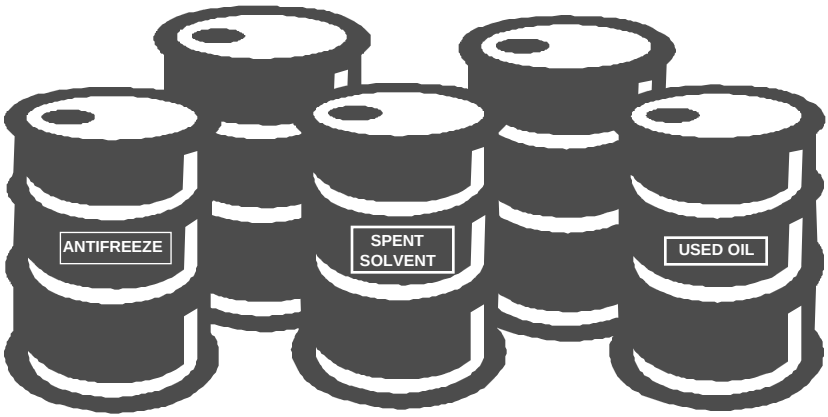
◆ Why Should Automotive Repair Shops ◆ Pay Attention to Their Wastes?

Automotive repair shops across the state regularly generate hazardous wastes. Parts cleaning, fluids draining and other activities in your repair shop can produce hazardous wastes such as spent solvents, waste antifreeze and contaminated used oil.

If improperly managed, these wastes may threaten the safety of you and your co-workers, damage the environment, or put your entire community at risk. Hazardous wastes can cause cancer and nerve damage and pollute drinking water supplies.

Your role in protecting public health and the environment is vital. Repair shop hazardous wastes don't belong on the ground, down the drain or in the dumpster. Good hazardous waste management practices are important for many reasons:

- You will ensure that you're in compliance with hazardous waste regulations and avoid costly penalties.
- You may save money by finding ways to reduce or recycle your wastes.
- You will be joining other automotive repair shops in Washington state that are taking pride in maintaining a clean and healthy environment.
- You may gain customers who know they have made a wise choice when selecting a shop that protects the environment.



◆ Automotive Repair Wastes ◆
Practical Do's and Don'ts

Some common wastes generated by automotive repair shops are described below, along with do's and don'ts for managing them safely and in compliance with the regulations. Make sure you find out what size of generator you are and what responsibilities you have, beginning on page 17.

Antifreeze ◆

If used antifreeze is recycled, it doesn't need to be counted or manifested as a hazardous waste. If used antifreeze is otherwise disposed, it is subject to full regulation, including counting unless the generator can document that the antifreeze is not hazardous..

Do's

✔ Recycle your own antifreeze or use a recycling service. Keep records of your recycling activities.

✔ Consider keeping a separate container for antifreeze that can be reused as a product in your shop without further treatment. Be sure to label this container differently than your waste antifreeze container.

✔ Consider using secondary containment for containers of liquid waste.

✔ Write the words "USED ANTIFREEZE" and "TOXIC" on your **waste** antifreeze container.

✔ Keep volumes of used antifreeze low by properly and routinely recycling it.

Don'ts

✘ Don't dispose of antifreeze to the sewer.

✘ Don't ever dispose of antifreeze to a storm drain, septic tank, or dry well, and never pour antifreeze on the ground.

✘ Don't mix waste antifreeze with any other waste. Keep it separate.

BATTERIES ----------

Spent lead acid batteries are hazardous wastes if they are not recycled or returned to a battery manufacturer for regeneration.

Do's

- ✔ Avoid long-term storage of batteries by sending them to a reclaimer at least every six months.
- ✔ Store batteries upright in a secure, covered place and check them often for leaks.
- ✔ Contract for recycling services for batteries.

Don'ts

- ✘ Don't store batteries outside.
- ✘ Don't put batteries in the garbage.
- ✘ Don't drain batteries into a drain or on the ground.

BRAKE FLUID ----------

Shops occassionally deal with small amounts of brake fluid. Because brake fluid is not crude-based, it shouldn't be added to used oil. Brake fluid itself is typically hazardous, do to toxicity. Brake fluid also becomes hazardous when it gets contaminated with chlorinated solvents from spray can brake cleaner.

Do's

- ✔ Collect brake fluid in a separate, marked, closed container and look for a waste hauler that will recycle it, or properly dispose of it as hazardous waste.

Don'ts

- ✘ Don't put brake fluid into your used oil container.
- ✘ Don't put brake fluid down any drain or on the ground.
- ✘ Don't spray brake cleaner around brake fluid.

COLD TANK (CARB CLEANER) ---------- ◆

Shops often have a 5-gallon bucket of carb cleaner used for degreasing parts. Often this solvent is methylene chloride, which is toxic and persistent. Such cold tank cleaner becomes hazardous when it is no longer usable.

Do's

✔ Consider eliminating chlorinated carb cleaner and switching to a less hazardous, non-chlorinated cleaner .

✔ Keep the container closed when not in use to avoid evaporation and recycle it when spent.

Don'ts

✘ Don't dispose of spent cold tank cleaner down any storm drain, septic system, dry well, or sewer.

✘ Don't put sludge from your cold tank into the dumpster or on the ground.

FLOOR CLEANING WASTE WATER ---------- ◆

If floors are kept generally clean to begin with and a non-toxic floor cleaner is used, wash water from floor cleaning shouldn't typically be hazardous. However, wash water may contain heavy metals and grease that need to be treated before discharging to the sewer, in order to meet water quality discharge limits

Do's

✔ Keep your floors clean to begin with. Catch leaks before they hit the floor and place in appropriate waste container.

✔ Clean small, non-chlorinated spills immediately with absorbent. Sweep and save for reuse until absorbing ability is gone. It can then go in the dumpster (with local landfill approval).

✔ Receive permission from your local sewer utility for your floor cleaning wastes to enter the sewer.

✔ Use absorbent pads and wring out to appropriate waste container when saturated.

Don'ts

✘ Don't use absorbents to clean up chlorinated solvents and then dispose in the dumpster. These are hazardous wastes.

✘ Don't let floor cleaning waste water go to an outside or inside storm drain or dry well.

Check with your sewer utility or city engineering department to find out for sure where your drains lead - most outside drains and some inside drains don't go to a sewage treatment plant, but instead are storm drains that lead directly to a stream, lake or ditch or to drywells which may contaminate ground water.

FREON (CFCS) ◆

It is illegal to vent freon to the environment, but generators are not required to manifest or transport their spent freon as hazardous as long it is reclaimed or recycled.

Do's

✔ Recycle waste freon on the premises using EPA certified recycling or recovery equipment.

✔ Keep records of the dates and amounts of on-site freon recycling.

Don'ts

✘ Don't evaporate or vent freon. This is illegal.

✘ Don't forget to manage filters from freon recovery equipment as hazardous waste.

FUEL FILTERS ◆

Limited data on used fuel filters show that they may be hazardous due to leachable lead. It is safest to manage them as hazardous waste. Remember, it is the generator's responsibility to determine if a waste is hazardous or not.

Do's

✔ Drain excess fuel from filters into a proper fuels container.

✔ Accumulate used fuel filters in a separate, marked, fireproof container.

✔ Determine through testing (see page 14) if your fuel filters are hazardous, and dispose of them accordingly.

✔ If you're a small quantity generator (see page 18), ask your local landfill if they will accept used, drained fuel filters.

Don'ts

✘ Don't put used fuel filters in the dumpster unless you're a small quantity generator with local landfill approval, or a regulated generator that can verify the filters aren't hazardous.

HOT TANK SOLUTION ---------- ◆

Some repair shops have hot caustic tanks used for cleaning greasy parts. These tanks aren't changed very often, but when they are they typically become hazardous waste due to heavy metal content and corrosivity.

Do's

✔ Accumulate all sludge from hot tanks in a closed, marked container and dispose of as hazardous waste.

✔ If you plan to evaporate hot tank solution to reduce weight and volume, see discussion on page 13. You may only need to count the sludge as hazardous waste.

✔ Check with Ecology's treatment by generator fact sheets (see page 24) if you plan to neutralize and/or separate metals from the solution.

Don'ts

✘ Don't dispose of spent hot tank solution down any drain or on the ground.

✘ Don't put hot tank sludge into the dumpster or on the ground.

✘ Don't forget to consider alternative cleaning methods such as detergent-based parts washers.

SHOP TOWELS ---------- ◆

If your towels are handled according to the advice below, they do not need to be managed and counted as a hazardous waste. If your towels are being disposed of they are hazardous waste if they fail any hazardous waste tests (ignitable, toxic, etc.).

Do's

✔ Use cloth towels which can be cleaned and reused.

✔ When possible, use less hazardous cleaning solvents (ones without chlorinated compounds).

✔ See if the laundry/recycling facility you use is meeting local sewer discharge limits. Laundries/recyclers that discharge their waste water to a drain field should be avoided.

Don'ts

✘ Don't throw dirty towels into your dumpster.

✘ Don't saturate towels. If you do, wring them out and reuse the liquid.

✘ Try not to use disposable paper towels or rags.

✘ Don't dispose of solvents by pouring them into containers of used shop towels.

continued

SHOP TOWELS (CONTINUED FROM PAGE 6) ---------- ◆

Do's

✔ Keep waste shop towels in a closed container marked "CONTAMINATED SHOP TOWELS ONLY".

SOLVENT TANKS AND OTHER SOLVENTS ---------- ◆

Parts washer solvent tanks used for cleaning parts and tools are often provided by waste haulers. Solvents used include mineral spirits, Stoddard solvent, petroleum naptha, xylene, etc., and they become hazardous wastes the moment the waste hauler exchanges the waste tank with a fresh tank. These spent solvents are hazardous because they are ignitable and/or toxic. Other solvents are typically hazardous too.

Do's

✔ Install a filter on your solvent sink to greatly increase the life of the solvent (but remember to dispose of the filters as a hazardous waste).

✔ Consider using less hazardous solvents or switching to a spray cabinet parts washer that doesn't use solvent.

✔ Consider purchasing your own solvent still and recycling solvent on site. (Sludges, filters and still bottoms generated from on-site solvent recycling are typically hazardous).

✔ Make sure solvent is actually too dirty to use anymore before it is exchanged for new solvent.

✔ If you recycle on-site, keep a log of dates, recycled amounts and batch make-up amounts.

✔ If you have other solvents, keep them in separate, labeled containers.

Don'ts

✘ Don't dispose of spent solvents to drains, the air, or the ground.

✘ Don't mix solvents with any other waste and keep different types of solvents in separate, labeled, closed containers.

✘ Don't get solvents near used oil.

✘ Don't evaporate solvents as a means of disposal.

SPRAY CABINET WASH WATER AND SLUDGE ---------- ◆

Some automotive repair shops clean parts in a recirculating spray cabinet with a caustic cleaner. Wash water and sludge from such parts cleaning may be hazardous because of high lead content and/or corrosivity. Excess oil and grease are also water quality concerns.

Do's

✔ If you're still using strictly solvents to clean parts, consider switching to a spray cabinet system.

✔ Determine through testing whether your spray cabinet wastes are hazardous. (See page 14 for more information about testing.)

✔ If you're planning to evaporate hazardous spray cabinet wash water and sludge to reduce its weight and volume, see discussion on page 13. You may only need to count the sludge as hazardous waste.

✔ Skim off oil from spray cabinet wash water and put it in your used oil container.

✔ Close off any drains leading to storm sewers, dry wells, or septic systems.

Don'ts

✘ Don't dispose of spray cabinet wash water down any storm drain, septic system or dry well. This can lead to water contamination and liability problems for you.

✘ Don't put spray cabinet sludge into the dumpster or on the ground.

✘ Don't forget to accumulate spray cabinet sludge in sturdy, closed containers and dispose of as a hazardous waste if necessary.

✘ Don't forget to get permission from your local sewer utility to make sure you are meeting local water quality limits.

Check with your sewer utility or city engineering department to find out for sure where your drains lead - most outside drains and some inside drains don't go to a sewage treatment plant, but instead are storm drains that lead directly to a stream, lake or ditch or to drywells which may contaminate ground water.

Spray Cans ◆

If you throw out partially empty spray cans of products like brake cleaner or carb cleaner, they are typically regulated as hazardous waste because they contain ignitable, chlorinated solvents.

Do's

✔ Use up an entire spray can before starting another. Keep careful inventory on the use of spray cans.

✔ If a spray can malfunctions (for example, the tip breaks off), handle as hazardous waste or consider returning it to your supplier.

✔ Consider phasing out spray cans in your shop and switching to manual pump cans.

Don'ts

✘ Don't throw partially empty spray cans into the dumpster.

Sump Sludges ◆

Sludges from your sump or oil/water separator may be a hazardous waste. You'll need to test the sludge at a professional laboratory to determine if it is hazardous, or save testing costs by assuming the waste is hazardous and managing it accordingly.

Do's

✔ Have the sludge tested when pumped out (see page 14). Keep all records.

✔ If the sludge is a hazardous waste, send it to a hazardous waste management facility.

Don'ts

✘ Don't put hazardous sludge in the dumpster or on the ground.

✘ Don't use a septic tank pumping service to remove this sludge. There is no legal, environmentally safe way for these services to dispose of the waste if it is hazardous.

Transmission Filters

Transmission filters should be handled like used oil filters. This means that used transmission filters are exempt from state hazardous waste requirements (including testing) if they are recycled or properly disposed of in a landfill or hazardous waste facility.

Do's

- ✔ Remove oil by draining for 24 hours.
- ✔ Keep drained filters in a container marked "USED TRANSMISSION FILTERS ONLY" and locate a scrap metal recycler who will take them.
- ✔ Put oil drained from filters in your "USED OIL ONLY" container.

Don'ts

- ✘ Don't put undrained filters in the dumpster.
- ✘ Don't put drained filters in the dumpster without first checking with your local landfill or health department.

Transmission (and other crude-based) Fluids

Crude-based fluids that can be managed like used oil include transmission fluid, hydraulic fluid, gear lube oils, metalworking oils and differential fluid. These wastes aren't regulated as hazardous *unless* they have been mixed or contaminated with hazardous wastes such as solvents, or they aren't recycled. (Recycling includes burning for energy recovery.)

Do's

- ✔ Manage used crude-based fluids like you do used oil.
- ✔ Review the used oil section on page 11.

Don'ts

- ✘ Don't ever dispose of these fluids to a storm drain, septic tank, dry well, sewer system, or dumpster.
- ✘ Don't accidentally contaminate your used oil container by mixing these fluids with even small amounts of brake cleaner, carb cleaner, or other wastes. This could turn the whole load into a hazardous waste.

EPA's decision not to list used oil as a hazardous waste means little change in the way repair shops in Washington state need to manage used oil. Used oil is regulated as a hazardous waste only if it has been mixed or contaminated with hazardous wastes such as solvents, or if it isn't recycled. (Recycling includes burning for energy recovery.)

Do's

✔ Keep used oil in a separate container marked "USED OIL ONLY".

✔ Place your container in a secure area and train your technicians to keep it secure.

✔ Make sure used oil is tested to be "on spec" if you receive (or give) oil for burning from another business.

✔ Keep records of used oil testing and shipments.

✔ Contact your nearest Ecology regional office (see back cover) for guidance on used oil burners.

Don'ts

✘ Don't ever dispose of used oil to a storm drain, septic tank, dry well, sewer or dumpster.

✘ Don't accidentally contaminate used oil by mixing it with even small amounts of brake cleaner or carb cleaner. This could turn the whole load into a hazardous waste.

✘ Don't pour used oil on the ground, even for dust suppression.

✘ Don't mix used oil with incompatible wastes such as brake fluid, power steering fluid or used antifreeze.

✘ Don't mix your used oil or "do-it-yourselfer" used oil with any other waste if you plan to burn it in your shop for heating.

USED OIL FILTERS ---------- ◆

Used oil filters are generally not hazardous waste except for heavy duty, terne-plated ones. (Generators of heavy duty, terne-plated filters need to determine whether or not their filters are hazardous. However, if both the filter and the oil are recycled, even these are excluded.) Before disposing of your used oil filters they should be drained while they are hot. Used oil filters can be punctured and hot-drained and crushed, or dismantled and hot-drained.

Do's

✔ Remove oil by puncturing filter and hot draining for 24 hours.

✔ Keep drained filters in a separate container marked "USED OIL FILTERS ONLY".

✔ Put oil drained from filters into your "USED OIL ONLY" container.

✔ Locate a scrap metal dealer who will recycle your filters.

Don'ts

✘ Don't put undrained filters in the dumpster.

✘ Don't put drained filters in the dumpster until you have checked with your local landfill or health department.

EVAPORATORS ◆

If certain conditions are met, evaporator units designed to reduce the weight and volume of some wastes by removing water are an allowable technology.

To use an evaporator, there are several things you need to do:

- Use only inorganic wastes in evaporator units. Inorganic wastes that might be evaporated include spent caustics, rinsewaters and water-based machining coolants;
- Don't use organic solutions, such as solvents, paints or oils in evaporators;
- Leave some water content in the remaining sludge -- don't "over cook" evaporator wastes;
- Dispose of remaining sludge properly -- it will typically be hazardous;
- Include a comment on your Form 2 that you are a generator evaporating waste;
- Report on your annual report (Form 4) the amounts of hazardous wastes present prior to evaporation and the remaining hazardous sludge.

Other things to consider include:

- Incorporating secondary containment around the evaporator to catch a spill;
- Condensing evaporator steam and reusing it in your caustic or rinse water tanks;
- Calling your local air quality authority to approve evaporator use.

TREATMENT IN PROCESS TANKS ◆

Hazardous wastes generated in process tanks such as spent caustic hot tank solutions, are excluded from hazardous waste requirements until the time they are removed from the tank, provided the following best management practices are followed:

1) The treatment process may not under any circumstances:
   - Generate extreme heat or pressure, fire or explosion, or violent reaction;
   - Produce uncontrolled toxic mists, fumes, dusts or gases in sufficient quantities to threaten human health or the environment;
   - Produce uncontrolled flammable fumes or gasses in sufficient quantities to pose a risk of fire or explosions;
   - Damage the structural integrity of the unit holding the waste; or
   - Through other similar means, threaten human health or the environment.

(continued)

TREATMENT IN PROCESS TANKS (CONTINUED) ---------- ◆

2) Generators must ensure that the process tank is compatible with the materials used for treatment and that it is designed to be operated under the treatment conditions.
3) Generators must ensure that employees are familiar with proper treatment procedures, waste treatment residuals handling and emergency procedures relevant to treatment operation.
4) Generators must develop an analysis plan that ensures that the waste is treated in an appropriate, safe manner and that ensures that waste treatment residuals are properly designated.
5) The waste generated in a process tank must be treated or removed within 90 days from the time the tank is taken out of service.
6) If the waste treatment residuals designate as dangerous waste, all treatment residuals must be removed from the tank within 90 days from the time the tank is taken out of service.
7) The resulting treatment residuals must be managed and disposed of in accordance with state and local requirements.
8) The performance standards of WAC 173-303-283(3) apply to generators who treat waste generated in process tanks.

TESTING ---------- ◆

Sometimes sending a sample of waste to a laboratory for analysis is the only way to determine if the waste is hazardous. Important tests for automotive repair shops include those for pH, volatile organics, total petroleum hydrocarbons, and heavy metals. If you test a waste once, and continue to use the same industrial process, you may apply those test results when designating future batches of the same waste. For example, if you test your spent spray cabinet wash water and sludge once and find it to be non-hazardous, you may use this knowledge for future disposal of this waste. If you need testing done, request Ecology's Hazardous Waste Services Directory or ask your association for help in locating a reputable lab

POLLUTION PREVENTION PLANNING REQUIREMENTS ---------- ◆

If you generate more than 2,640 pounds of hazardous waste per year (this is an average of 220 lbs / month), you are required to prepare a pollution prevention plan and pay a planning fee. (See pages 17-18 to determine the amount of waste you generate.)

For more information, contact your nearest Ecology waste reduction and recycling specialist at: Bellevue (206) 649-7000, Olympia (360) 407-6300, Spokane (509) 456-2926 or Yakima (509) 575-2490.

◆ WHY NOT REDUCE AND RECYCLE YOUR WASTES? ◆

Reducing hazardous waste in your repair shop makes good business sense. Reducing waste, *before* you generate it, can help you to:

- ✔ avoid longterm liability concerns associated with generating hazardous wastes,
- ✔ save on hazardous waste management costs, and
- ✔ help create a healthier, safer work environment.

It may not be as hard as you think. A good place to start is to walk through your shop and review all of the processes which use toxic chemicals or generate hazardous waste. Pages 2 to 12 in this book will help you determine which wastes are likely to be hazardous.

As you consider each process, ask yourself if you can change the process in some way so that it doesn't produce hazardous waste. Some options to think about are:

Substituting a less toxic raw material

- Switch to non-chlorinated compounds, such as a citrus based solvent, for parts cleaning.
- Always ask for an MSDS before ordering any new product. Biodegradable does not necessarily mean environmentally safe, or that the product is exempt from regulations. Safe products that are mixed with hazardous substances, like oil or heavy metals, may need to be handled as hazardous waste.

Use good operating practices

- Solvent losses due to evaporation, equipment leaks or spills and inappropriate usage can range from 25-40%. Keep lids on all solvents and turn off your solvent sink when not in use. Use dirty solvent first when cleaning parts.
- Seal floor drains. Do not allow any cleaning solutions to enter the sewer unless they meet local sewer utility limits.
- Always use funnels or pumps to dispense chemicals.
- Keep all chemicals in sealed containers with tight-fitting lids.

Change your process

- Switch to a recirculating spray cabinet for cleaning parts instead of using solvents or hot tanks.

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- Use a filter on parts washers to extend the life of the solvent.
- Consider switching to a water-based cleaner instead of using chlorinated spray cans of brake cleaner or carb cleaner.

Recycle wastes and waste water which you can't reduce

- Contract for a recycling service to pick up used solvent.
- Consider an on-site distillation unit to recycle spent solvents.
- Consider putting dirty floor washing water into your spray cabinet instead of down a drain.

◆ YOUR REQUIREMENTS AS A GENERATOR ◆

Automotive repair shops become Regulated Generators if they generate more than 220 lbs. of hazardous waste per month or batch or ever have more than 2,200 lbs. of hazardous waste on-site. Shops that generate less are Small Quantity Generators. 220 lbs. is about one half of a 55-gallon drum. Answer the following questions about the amount of hazardous waste your shop generates to determine your requirements as a generator. *Remember: Solvents, spray cabinet solutions and other substances are not wastes until the day they are no longer usable.*

WASTE ANTIFREEZE
(multiply the gallons each month **not** to be recycled X 9) _____ LBS

BATTERIES
(pounds of those per month **not** to be recycled) _____ LBS

USED BRAKE FLUID
(multiply the gallons each month disposed of or amount on site X 9) _____ LBS

SPENT COLD TANK (CARB CLEANER)
(multiply the gallons disposed per month X 12) _____ LBS

FREON (CFCS)
(pounds of spent freon per month) _____ LBS

USED FUEL FILTERS
(pounds disposed of per month or on site) _____ LBS

HOT TANK SLUDGE[1]
(multiply the gallons disposed per month X 8) _____ LBS

SOLVENT TANKS
(multiply the gallons exchanged per month X 8) _____ LBS

OTHER SOLVENT
(multiply the gallons disposed of per month X 8) _____ LBS

SPRAY CABINET SLUDGE[1]
(multiply the gallons disposed of per month X 8, if hazardous) _____ LBS

[1] Used hot tank solution and test tank water **don't** need to be counted if treated in the existing process tank under certain BMP's (see page 13).

(continued)

(continued from page 17)

SUMP SLUDGES
(pounds of sludge per disposal, if hazardous) _____LBS

CONTAMINATED USED OIL
(gallons of contamined oil per month X 8) _____LBS

OTHER HAZARDOUS WASTES
(pounds per month) _____ LBS

TOTAL

✔ If any one answer or combination of answers totals over 220 lbs., you are a **Regulated Generator** required to meet compliance Steps 1-10 discussed below.

✔ You are a **Small Quantity Generator** if you always generate less than 220 lbs. of hazardous waste in per month or batch and always dispose of the waste before you accumulate more than 2,200 lbs. Small quantity generators are required to comply only with Steps 1 and 8 (and 3 if you already have an active RCRA ID Number).

STEP 1 IDENTIFY YOUR WASTE AND GENERATOR STATUS

You must determine if any of your wastes are regulated as hazardous wastes by following the "designation" procedures in the Dangerous Waste Regulations. First look for each of your wastes on the Discarded Chemical Products and Dangerous Waste Sources Lists in the regulations. This is where you'll find **listed** wastes. Then, if the waste is not on the lists, determine if it exhibits any of the hazardous waste **characteristics** (ignitability, corrosivity, reactivity, leachability). Waste mixtures (for which you know some or all of the constituents and concentrations) must also be evaluated using available data to see if they meet the **criteria** of toxicity or persistence.

To see how automotive repair shop wastes fit into the state's different hazardous waste categories, turn to page 23 (after Steps 1-10). Determine your generator status (see pages 17 - 18). To request Step by Step Fact Sheet #1 for more help in designating your wastes, see page 24.

STEP 2 OBTAIN A GENERATOR IDENTIFICATION NUMBER

If you are a regulated generator, you are required to notify Ecology of your hazardous waste activities and obtain a site-specific RCRA Identification Number using Form 2 (available from Ecology). Many hazardous waste haulers and management facilities are also required to have an Identification Number. They may not accept your waste if you don't have an Identification Number - even if you're a Small Quantity Generator and aren't legally reqired to have one.

STEP 3 REPORT ANNUALLY

If you have an active RCRA Identification Number, you must submit an annual report (using Ecology's Dangerous Waste Annual Report forms) by March 1 of each year, even if you have not generated waste in that year. Record your hazardous waste activities for the previous calendar year on this report, including how much waste you've generated or accumulated on-site and waste you've sent off-site.

To assist generators, Annual Report workshops are typically held at various locations in the state in February.

STEP 4 PERFORM PREVENTIVE MAINTENANCE

Hazardous wastes must be handled in a manner that prevents leaks, spills, fires and explosions. Develop and follow a written inspection schedule for all hazardous waste storage areas, containers and tanks and include all emergency, safety and monitoring equipment on-site.

Keep the necessary emergency equipment (such as fire extinguishers and telephones) on hand and accessible to employees. You must regularly test and maintain all your emergency equipment. Notify local authorities (such as police, fire departments and local hospital) of the characteristics of hazardous waste generated at your site, as well as the facility layout and access routes.

STEP 5 PROPERLY

STEP 6 PLAN FOR EMERGENCIES

There must be an emergency coordinator on the premises or on call at all times who is familiar with the operations and activities at the site and has the authority to commit the resources necessary to deal with a hazardous waste emergency. In a small shop, this will probably be the owner or manager.

Planning for emergencies can help prevent a small spill from turning into a dangerous and expensive contamination problem. Make sure you train your employees to know how to react to different types of emergencies in your shop.

STEP 7 USE PROPER CONTAINERS AND MANAGE THEM CORRECTLY

Many hazardous waste incidents and work-related injuries are linked to improper or unsafe container management. To avoid these preventable accidents:

- Accumulate your wastes in containers which are sturdy, compatible, leak-proof, properly labeled, and kept closed unless waste is being added or removed;
- Do not accumulate incompatible wastes in the same container or in the same areas;
- Store reactive and ignitable wastes according to the Uniform Fire Code;
- Maintain a minimum aisle space of 30 inches between container rows; and
- Inspect containers and storage areas at least once a week, keeping a log of inspections.

STEP 8 ARRANGE FOR PROPER TRANSPORTATION AND DISPOSAL

As a generator of hazardous waste, you are responsible for following regulations for the safe transportation and disposal of your waste, even after it leaves your premises. Before transporting hazardous waste off-site, you need to make sure it is packaged, labeled and marked in accordance with U.S. Department of Transportation hazardous material regulations. Call (360) 753-6427.

Regulated Generators must hire a transporter that has a RCRA Identification Number and ensure wastes are handled at a permitted hazardous waste treatment, storage or disposal (TSD) facility or at a facility that legitimately recycles or reclaims hazardous waste. Small Quantity Generators can transport their own wastes or make sure they are sent to a:

- permitted hazardous waste facility;
- legitimate recycler;
- facility permitted to handle moderate risk waste; or
- a permitted solid waste facility, if allowed by the local health department.

STEP 9 MANIFEST SHIPMENTS OF HAZARDOUS WASTE

To ship hazardous wastes off-site, Regulated Generators must prepare a Uniform Hazardous Waste Manifest Form which identifies the contents of the shipment, the transporters used and the permitted facility receiving the wastes. This form accompanies the waste from the site where it is generated to its ultimate resting place and back to you for your records. If you are a Regulated Generator your waste hauler needs to use a manifest and not just issue a bill of lading or receipt.

Some hazardous wastes are restricted from land disposal unless they meet specific treatment standards. If you send your waste off-site for disposal, you must prepare and sign a certification which states that either your waste is not restricted from land disposal or that it meets the treatment standards outlined in the regulations. This land disposal restriction certficate is attached to the manifest form for the shipment.

Often the waste hauler fills out these forms and you just sign them. You should carefully check all information before signing.

If a signed return copy of the manifest has not been received from the waste management facility within 35 days of the shipment date, you must try to determine what has happened. Submit an exception report documenting your efforts to Ecology if you have not received the last copy of the manifest form within 45 days of the shipment date.

STEP 10 KEEP RECORDS OF HAZARDOUS WASTE ACTIVITIES

There are a number of records, reports and forms automotive repair shops must prepare under the Dangerous Waste Regulations and keep on the premises for at least five years, including annual reports, manifest forms, exceptions reports, and land disposal restriction certificates. Keep copies of notification reports (Form 2), inspection records, results from waste analyses or tests, and on-site recycling records for as long as you are in business.

◆ Automotive Repair Shop Hazardous Wastes ◆ by Waste Category

The following table shows where typical automotive repair shop wastes fall in the state's hazardous waste categories. Your wastes may be different, depending on the chemicals and processes you use. Testing may be necessary to determine whether certain wastes are hazardous.

Major Category	Hazardous Waste Type	Automotive Repair Shop Examples
Listed Wastes	Discarded Chemical Products	not typically generated by automotive repair shops
	Dangerous Waste Sources	cold tank carb cleaner
		other chlorinated solvents
		contaminated oil
Characteristic Wastes	Ignitable	spent solvents
	Corrosive	lead acid batteries (if not recycled)
	Reactive	not typically generated by automotive repair shops
	Toxicity Characteristic (TCLP)	spray cabinet wash water (possible)
Criteria Wastes	Toxic	waste antifreeze
		brake fluid (possible)
	Persistent	methylene chloride from aluminum parts cleaning
		other solvents with word "chlor" as part of main ingredients

◆ Where to Get More Help ◆

It's your responsibility to safely manage wastes generated at your facility. Don't be afraid to ask for help. Ecology can help you keep up-to-date and in compliance with the regulations. For additional information and assistance, contact the nearest Ecology Regional Office and ask for a Hazardous Waste Specialist. To receive any of the following publications, contact Ecology's Publications Office at (360) 407-7472.

Clean Air Washington Information Packet
(1992, #FA92-13)

Discussion on the Toxicity Characteristic Rule
#96-427

Free Help for Businesses
#96-407

Regulation of Dangerous Waste Being Recycled
#91-426, Revised 1994

Shoptalk, a quarterly newsletter for hazardous waste generators

Step by Step: Fact Sheets for Hazardous Waste Generators, includes Glossary, Subject Index, and Services Directory
#91-12a-s, Revised 1996

Success Through Waste Reduction - Proven Techniques from Washington Businesses
#90-22

The Dangerous Waste Regulations
(Chapter 173-303 WAC)

Waste Reduction for Your Business
#89-56, Revised 1991

Waste Reduction for Vehicle Maintenance Shops
#92-107

Waste Minimization for Production Painting Operations
96-405

Changes to the Dangerous Waste Regulations: Are you Affected?
#96-403

What is a Small Quantity Generator: Your Regulatory Status Under the Dangerous Waste Regulations
#96-404

Treatment by Generators Fact Sheets

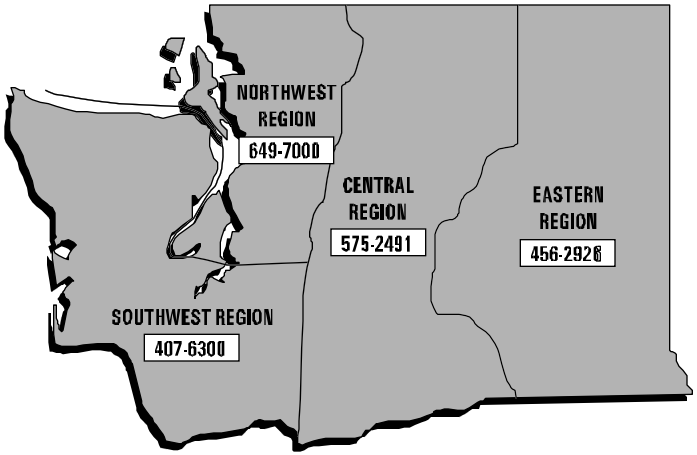
Elementary Neutralization
#96-417

Evaporation Treatment Specific Guidance
#96-414

Separation Treatment Specific Guidance
#96-418

The Department of Ecology wishes to recognize the many automotive associations listed on the back cover and the automotive businesses who contributed their time and expertise in creating this booklet.

While this booklet summarizes some of the requirements for generators of automotive waste under the Dangerous Waste Regulations (Chapter 173-303 WAC), it does not replace them. Always refer to the regulations themselves for more details or contact the nearest Ecology regional office.



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Automotive Service Association

Autobody Craftsman Association

Washington State Auto Dealers Association

Auto Untied Trades Organization

Washington Automotive Wholesalers

Northwest Tire Dealers Association

Automotive Engine Rebuilders Association

Automotive Engine Rebuilders Association

Production Engine Remanufacturers Association

Nation Automotive Radiator Service Association